# PREFACE

"Four chapters good, two chapters bad" (with apologies to George Orwell) appears to have been orthodoxy's response to the 1992 [British] Royal Society publication, *Risk: analysis, perception and mana ement*. The "good" four chapters were those written by distinguished engineers, statisticians and natural scientists, which reflected a view of public risk management as properly the domain of science and engineering rather than of politics and economics. That is, both risk, and human behaviour in relation to risks, are objectively discoverable by orthodox canons of science, and the results, wherever possible expressed in numbers, are capable of being fed back into enlightened policy-making in the form of rational decision criteria applied by experts. The central problem for effective public risk management is to ensure that these decision criteria and the associated risk data are as accurate and scientifically well grounded as possible—including attempts to incorporate "the human factor", provided that such an elusive element can be reduced to terms that are tractable for engineers.

Indeed, this approach is not simply an engineer's view, for there are social science approaches to risk that fit the same conception of risk management very closely, and hence can readily be absorbed into the paradigm. The most notable case is the well established and enormously successful psychometric paradigm, which aims to identify general features of individual cognitive approaches to risk; but Mary Douglas (1994) has argued that the developing "risk amplification" and "risk communication" approaches also fit with the dominant "enlightened engineering" approach to risk, because both essentially exclude politics from the analysis.

For this dominant approach, "problems" come in the form of "irrational" behaviour by politicians and bureaucracies, unaccountably declining public trust in scientific expertise, and "maverick" social scientists who do not see risk assessment and management as a politics-free zone. Indeed, the "two chapters bad" of the Royal Society document were precisely those concerned with risk perception and management. These chapters advanced the unorthodox ideas that there might be a political dimension in the way risks are socially construed and that the fundamental doctrines of risk management are in fact inherently plural, disputable and disputed. Significantly, the document was not issued as a report of the Society (unlike its 1983 predecessor), but rather as a report of a study group, with the contents of each of the chapters attributed to its author(s). Reasons of speed

and convenience in editing were given to account for this form of publication, but even in the preface it is hinted that the need to disassociate the Royal Society from the dangerous and controversial ideas expressed in the social science chapters were the real reason for the change of format (see also Warner 1993).

A few heretics, of course, responded to the document with the opposite mantra "two chapters good, four chapters bad"—and some social scientists (notably Mary Douglas 1994) even criticized the offending social science chapters for not going far enough to embrace a politics-centred approach to risk. The "two chapters good" heretics tended to be those who are known to be critical of the dominant "enlightened engineering" approach to risk management (see Adams 1995). For example, some claim that the technocratic and quantitative emphasis in orthodox risk management tends to limit effective decision-making to a small technical elite, producing a structure that may actually blank out "safety imagination" by creating illusions of invulnerability (see Toft, this volume) and which may be highly vulnerable to "groupthink" (the well known term coined by Janis (1972) to denote unreflective adherence to unexamined assumptions). Others claim that the orthodox approach to risk management does not reflect popular attitudes to risk management (and hence lacks social legitimacy by dismissing popular concerns as "irrational"; Perrow 1984, Shrader-Frechette 1991). Even Judge Stephen Breyer (1993), in a relatively orthodox critique of conventional risk regulation politics, concludes that the solutions lie in institutional design rather than in better "risk communication" or improved technical formulae.

Our aim in producing this book is to pursue this exchange, in the belief that the rival doctrines of risk management identified in chapters 5 and 6 of the Royal Society Study Group Report (Royal Society 1992) merit some further attention. To the extent that "risk" is socially construed (involving conflicting conceptions of trust and blame), inherently involves who-gets-what distributive issues that cannot finally be solved by any simple aggregate *numéraire,* and is to some extent a "trans-scientific" area of inquiry, it follows that better understanding may be achieved through both a greater sensitivity to the rhetorical aspects of risk management debates and by a careful juxtaposition of contrasting points of view. As we explain in the first chapter, this book is designed in that spirit as a "conversation" relating to seven "what to do" aspects of risk management; and the final chapter aims to develop the "collibration"[1] approach to risk management, which was outlined in only the sketchiest form in the 1992 Royal Society document and was criticized subsequently, with some justification, for being too undeveloped to count as a serious alternative to conventional ideas of risk management.

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1. See p. 206 for an explanation of this term.

We are very grateful to the Royal Society for granting permission for us to use much of the material contained in pages 154–67 of the 1992 report, as the basis for the introductions to the seven areas of debate. We are also indebted to the contributors who enthusiastically responded to our request to develop selected viewpoints in the risk management debate and who patiently endured the exceptionally long gestation period of the book. We also wish to thank the ESRC who funded a research seminar programme at LSE in 1991 at which some of the material contained in this book was first presented and in which the intellectual framework of the book began to develop; and to couple this with thanks to both the ESRC and LSE for their support for research to underpin the two controversial social science chapters in the 1992 Royal Society document. In addition, we have debts too numerous to mention to colleagues at LSE and elsewhere who encouraged us and helped us to develop our ideas. One of them was the late Barry Turner, who collaborated with us in writing the social science chapters of the 1992 Royal Society document and who we hoped would be a co-editor of this book. Barry Turner's ideas about how organizations create disaster helped to inspire much of the "safety" literature in British social science in the 1980s, and Barry helped us to design this book and to select appropriate contributors. We dedicate the book to his memory.

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